

## United States Patent [19]

Steele et al.

## [11] Patent Number:

5,169,342

[45] Date of Patent:

Dec. 8, 1992

# [54] METHOD OF COMMUNICATING WITH A LANGUAGE DEFICIENT PATIENT

[76] Inventors: Richard D. Steele, 2926 South Ct.,
 Palo Alto, Calif. 94306; Michael
 Weinrich, 220 Northway, Baltimore,
 Md. 21218; Young Harvill, 1784

Hamlet St., San Mateo, Calif. 94403; Maria K. Kleczewska, 4232 23rd St., San Francisco, Calif. 94114

·

[21] Appl. No.: **530,735** 

[22] Filed: May 30, 1990

[51]	Int, Cl.5 G09B 21/0	90
	U.S. Cl 434/112; 434/11	
	434/169; 434/307; 340/709; 273/45	4;
	273/DIG. 28; 341/28; 395/15	59

### [56] References Cited

#### U.S. PATENT DOCUMENTS

8/1978	Graf	340/721 X
12/1985	Goldwasser et al	434/169 X
4/1987	Dunn	364/521 X
4/1989	Terasawa	364/521
9/1989	Oosterholt	364/521 X
	12/1985 4/1987 4/1989	8/1978       Graf         12/1985       Goldwasser et al.         4/1987       Dunn         4/1989       Terasawa         9/1989       Oosterholt

#### OTHER PUBLICATIONS

Richard D. Steel, et al. "Computer-Based Visual Communication In Aphasia", Neuropsychology, vol. 00, No. 0, pp. 000-000, 1988.

Severely Aphasic Patients On A Computer-Aided Visual Communication System".

Michael Weinrich, et al. "Representations of 'Verbs' In A Computerized Visual Communication System", Aphasiology, 1989; vol. 2.

Michael Weinrich, et al. "Processing Of Visual Syntax In A Globally Aphasic Patient" Brain And Language 1989.

Primary Examiner—Richard J. Apley
Assistant Examiner—Joe H. Cheng
Attorney, Agent, or Firm—Limbach & Limbach

#### [57] ABSTRACT

An interactive method of communicating with a language deficient user such as an aphasic patient is disclosed. The computer has a display with a pointing device for visually indicating a position through a cursor means on the display. In one example, a plurality of images with each image being a graphical representation of word oriented information or a component thereof is displayed. A plurality of tool-like icons is also displayed. The cursor can be positioned to one of the desired plurality of tool-like icons. When one of the plurality of tool-like icons is selected by the user, the cursor is changed into the image of the tool-like icon selected. The tool-like icon image selected for the cursor is then moved to one of a plurality of the images which represent word-oriented information or a component thereof. When the cursor is activated on the image, a display of information represented by the toollike icon acting on the word-oriented image is then visually displayed by the computer.

## 16 Claims, 33 Drawing Sheets

Microfiche Appendix Included (138 Microfiche, 2 Pages)

